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09/911,419	07/25/2001	Tomoyuki Oshiyama	826.1737	4145

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STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
LEE, HWA C	

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 12/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/911,419	OSHIYAMA ET AL.	
	Examiner	Art Unit	
	Hwa C Lee	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 September 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 8-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 8-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 09/04/04 has been entered.

Response to Arguments

2. Applicant's arguments, see page 14, last paragraph – page 15, 1st paragraph, filed 09/03/04, with respect to the rejection(s)of claim(s) 8-22, 25, 27 and 30 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found art, Matthews, U.S. Patent No.: 6,701,012. See below for complete listing and explanation of the new rejections.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claim 25 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A propagation signal transmitting a program is not a claimable matter.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Kumagai, U.S. Patent No.: 5,809,240.

7. In regard to claim 1, Kumagai explicitly teaches an image generating system which generates or edits an image using a plurality of image generation devices, comprising: a division unit dividing a target image into a plurality of divided images (FIG. 1, FIG. 5, FIG. 3, No. 11a; Col. 2, line 60 – Col. 3, line 43; Col. Col. 6, lines 45-57). A graphics data is stored in one workstation, wherein a plurality of workstations can access the same graphics data over a network and said graphics data is divided and sent to each networked workstations in order to facilitate manipulation of said graphics data in portions by said plurality of workstations.

8. Kumagai also teaches a providing unit providing a reference image corresponding to the target image to be displayed on the plurality of image generation devices (Col. 4, line 50 – Col. 5, line 4). Kumagai explicitly teaches allowing any and all portions of the original graphics data to be displayed on all workstations in order for each workstation to check the progress of the other workstations. Said displaying all portions of the original graphics data being manipulated specifically is providing a reference image corresponding to the target image.

9. Kumagai explicitly teaches distributing a plurality of divided images obtained by said division unit to corresponding image generation devices, and distributing the reference image to the image generation devices (FIGS. 3-5 and Col. Col. 6, lines 45-57). The graphics data is clearly divided and distributed to specific workstation. In addition, as applied above, any or all of the original graphics data is also displayed on each workstation, which specifically is a reference image.

10. Kumagai explicitly teaches displaying the divided image and the reference image in the image generation device (FIGS. 5 and see paragraph 6 above).

11. Kumagai explicitly teaches merging the resultant manipulated graphics data taken from the plurality of workstations (Col. 3, lines 31-43). Said merging divided graphics data specifically is integrating divided images generated by the plurality of image generation devices. Said merging must be performed by either a hardware or software.

12. In regard to claim 2, the limitations of the instant claim are recited in claim 1 above in identical language, and thus the same basis and rationale for claim rejection as applied to claim 1 are applied. The recitation, an image distribution device for use in an image generation system, which generates or edits an image using a plurality of image generation devices, has not been given patentable weight because the recitation occurs in the preamble. A preamble is generally not accorded any patentable weight where it merely recites the purpose of a process or the intended use of a structure, and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88

USPQ 478, 481 (CCPA 1951). Kumagai explicitly teaches an image distribution device since the graphics data is divided and distributed to a plurality of workstations as applied to claim 1 above.

13. In regard to claim 3, Kumagai explicitly teaches a plurality of workstations (see claim 1above), which specifically are a plurality of image generation devices for use in an image generation system, which generates or edits an image using the plurality of image generation devices. In addition, each workstation comprises a display unit (FIG. 5) receiving from an image distribution device (workstation 1, where the graphic data is stored) a divided image obtained by dividing a target image and a reference image corresponding to the target image and displaying the divided image and the reference image (see claim 1 rejection). Furthers, Kumagai explicitly teaches in FIG. 3, a data division and data manipulating unit (11a), a command processing unit for processing commands entered at a keyboard, such as, Add, Delete, and Move commands (11b), a display window managing unit for managing areas of graphic data to be manipulated by the workstations (11c), an event managing unit for handling events entered using the mouse or keyboard (11d), a graphic displaying unit for outputting graphic data to a display (11e), and a message processing unit for handling messages to be output to the display. Thus, the image is divided and distributed to the plurality of workstations, which specifically is transmitting the image using a transmission unit (Col. 7, line 52 – Col. 8, line 10).

14. In regard to claims 4-5, Kumagai explicitly teaches a method of generating an image by generating or editing an image using a plurality of image generation devices as applied to claim 1 above. The limitations of the instant claim is almost identical in

language as claim 1, with the only difference being that the instant claim recites a method which comprises the same function as the system recited in claim 1. In addition, the preamble is not given patentable weight (see claim 2 above). Further, Kumagai teaches a program for performing said limitations of the claims since a program is a set of executable commands performed by the processor, and Kumagai explicitly teaches an application program (3) and FIGS 6A-C explicitly shows a graphical user interface program for performing the functions of the graphics system.

15. In regard to claim 6, the same basis and rationale for claim rejection as applied to claims 4-5 are applied. A program must be stored in a storage medium and Kumagai explicitly teaches a data memory (12) in communication to a processor.

16. The applicant cancels claim 7.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

18. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

19. Claims 8 and 11-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al., U.S. Patent No.: 6,357,042 in view of Kumagai, and further in view of Matthews, U.S. Patent No.: 6,701,012.

20. In regard to claims 11 and 22, Srinivasan et al. explicitly teaches editing video data using a plurality of authoring (editing) stations for tracking separate image editing for each authoring station (FIGS. 7-8, 15 and Col. 12, line 46 – Col. 15, line 48). Each authoring station tracks a separate image from the video stream, wherein said image is edited by adding text, icons, etc. In addition, since said video stream is MPEG encoded (FIG. 1 and Col. 5, line 66 – Col. 6, line 52), time series information is included in the video stream for properly ordering the image frames in the video stream. Further, FIG. 15 explicitly shows image frames having corresponding time series data, wherein said time series data is used to identify each image frame. Said images generated on the display (FIG. 15) specifically are displayed according to the time series information. Thus, Srinivasan et al. explicitly teaches dividing video streams into a plurality of image frames for independent image editing; distributing time series information defining a moving picture to be generated together with divided image to a corresponding image generation device; and generating (displaying) a plurality of divided images corresponding to the received divided images according to the time series information.

21. Srinivasan et al., however, does not explicitly teach dividing each image frames into a target image and into layers; distributing said divided images to corresponding image generating devices; generating or editing a divided image corresponding to the received

divided image in each image generation device; and integrating divided said divided images.

22. Kumagai teaches an image generation system as applied to claim 1 above, wherein said image generation system comprises a distribution unit and an integration unit as recited in the instant claim. In addition, a generation unit specifically is identical to the display unit as recited in claim 1. Kumagai also teaches a division unit having a function of dividing a target image into a plurality of areas.

23. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Srinivasan et al. and to add from Kumagai the method of dividing each image frame and distributing them to a plurality of workstations in order to divide the image editing work and thus performing a plurality of image processing in parallel. Said parallel processing allows the image processing to be completed faster and thus requires less processing power and the work is completed faster. Since Srinivasan et al. teaches separating a video stream into a plurality of image frames, it would be an obvious modification to further divide each image frame into a plurality of image portions, which will speed up image editing process as taught by Kumagai. Further, by applying the image dividing method to a video stream, the image frames displayed (FIG. 15) as taught by Srinivasan et al. are comprised of divided images, which are edited separately and then integrated as taught by Kumagai.

24. Both Srinivasan et al. and Kumagai do not explicitly teach dividing the target image into layers when the target image is formed by a plurality of layers. Said dividing the target image into layers, however, is well known in the art. An analogous art, Matthews, explicitly

teaches decomposing images into separate layers (FIGS. 1-2; Col. 4, line 16 – Col. 5, line 33). Each layer contains specific data types (data, lines, photographs), and thus the background layer may contain the photograph and the foreground layer contains text.

25. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Srinivasan et al. and Kumagai and to modify it by adding from Matthews the method of decomposing an image into layers in order to separate the image into a foreground layer comprising texts and a background layer comprising photographic data. This is particularly useful when storing or transmitting images. By separating the image into layers, each layer can be compressed and transmitted to a plurality of workstations using less bandwidth and stored using less storage space. Thus, the modification of Matthews improves transmission and storage efficiency, which improves the speed of image processing system of Kumagai.

26. The image distribution system of claim 11, taught by Srinivasan et al., Kumagai and Matthews specifically, is comprised of a plurality of devices, which specifically is an image distribution device of claim 22. Both claims are directed to the same limitations.

27. In regard to claim 8, Srinivasan et al., Kumagai, and Matthews teach the system according to claim 11. In addition, Kumagai explicitly teaches said distribution unit distributes only a divided image requiring generation of a corresponding divided image to the image generation device (FIGS. 4-5). All divided images that are transmitted are required to be displayed on the corresponding workstations as applied to claim 1 above.

28. In regard to claim 12, the same basis and rationale for claim rejection as applied to claim 11 are applied. Srinivasan et al. teaches tracking a plurality of images from a video

stream. When modified by adding the image processing system of Kumagai, each image from the plurality of images is divided, transmitted to a plurality of workstations (image generation devices) and then integrated together to form a plurality of images.

29. In regard to claim 13, Srinivasan et al., Kumagai and Matthews teach all limitations as applied to claim 11 above. In addition, Srinivasan et al. explicitly teaches a distributing image movement information defining movement of an image element drawn in a distributed image together with the divided image to a corresponding image generation device; and said image generation device generates a plurality of divided images corresponding to divided images received according to the image movement information (FIGS. 1-5 and Col. 6, 19 – Col. 11, line 27). Image objects are tracked using tracking module to detect changes in the coordinates of the tracking module, which specifically is movement information. Thus, when the plurality of image frames from the video stream are divided and then edited in parts or layers and then integrated again, said generated images specifically corresponds to divided images received according to the image movement information.

30. In regards to claim 14, Srinivasan et al., Kumagai and Matthews teach all limitations as applied to claim 13 above. In addition, Srinivasan et al. explicitly teaches said image movement information contains as a condition of defining movement of the image element at least one of information defining required time, information defining a time interval of each frame of moving picture, information defining enlargement or reduction of the image element, and information defining rotation of the image element (FIGS. 4-5 and Col. 9, line 31- Col.). Srinivasan et al. teaches a 30 frames per second video stream rate, which

specifically is information defining a time interval of each frame moving picture and information defining required time. If the image object has moved by the second frame, then the required time between movements is 1/30 second, which also is the time interval of each frame.

31. In regard to claim 15, Srinivasan et al., Kumagai and Matthews teach all limitations as applied to claim 11 above. In addition, Kumagai teaches each image generation device outputs a divided image being generated (FIGS. 4-5). As applied to claim 1 above, Kumagai teaches merging said divided images from a plurality of workstations after each workstation performs image editing, which specifically is integrating divided images being generated from respective image generation devices. Further, Kumagai explicitly teaches displaying the progress of the image edition from the rest of the workstation on each workstation, which specifically is transmitting an image integrated by said integration unit to each image generation device.

32. In regards to claim 16, Srinivasan et al., Kumagai, and Matthews teach the system according to claim 15. In addition, Kumagai explicitly teaches a workstation management table (32), which specifically controls which divided image is transmitted to which workstation. Thus, said management table specifically is outputting a divided image being generated at an instruction form a source of the divided image or at each predetermined time interval.

33. In regards to claim 17, Srinivasan et al., Kumagai, and Matthews teach the system according to claim 11. In addition, said divided image specifically is a difference data format since the divided image is the difference (subtraction) from the original image.

Further, Kumagai teaches displaying the progress of the rest of the workstations (Col. 4, line 50 – Col. 5, line 5), which specifically is outputting a divided image in a difference data format; and said integration unit regenerating a divided image by adding a newly received divided image to a previously received divided image, and integrates regenerated divided images. In other words, regenerating a divided image specifically is updating the progress of the image editing from all workstations.

34. In regards to claim 18, Srinivasan, Kumagai, and Matthews teach the system according to claim 11, but do not explicitly teach an alarm unit raising an alarm when a position of an image element contained in a target divided image are not consistent with a position of the same image element contained in an adjacent divided images. It is well known and obvious in the art, however, to alert the user when the images to be combined do not line up properly. When misalignment is detected, it is obvious to raise an alarm in order to notify the user that the images to not align and must be realigned.

35. In regards to claim 19, Srinivasan et al., Kumagai and Matthews teach all limitations as applied to claim 11 above. Kumagai teaches dividing the target image into parts, wherein each part is transmitted to a particular workstation based on the workstation management table (FIG. 4, No. 31 and Col. 7, lines 14-64), and Matthews teaches separating an image into layers as applied to claim 11 above. Separating the image data into parts or layers specifically is dividing a target image based on an arrangement of an image element in the target image or a characteristic of the target image.

36. In regards to claim 20, The system according to claim 11, wherein said division unit divides the target image such that a sum of length of division lines for dividing the target image is smallest.

37. In regards to claim 21, Srinivasan et al., Kumagai and Matthews teach all limitations of claim 11 above. Kumagai explicitly teaches dividing the target image data into four parts to be distributed to four workstations (FIGS. 4-5), which specifically is dividing the target image depending on a number of image generation devices. It would be inefficient to divide the images into a number of parts, which does not correspond to the number of workstations.

38. In regards to claim 23, Srinivasan et al., Kumagai and Matthews teach all limitations as applied to claims 11, 15 and 16 above. The limitations of the instant claim are identical to the combination of claims 11 and 16.

39. In regards to claim 24, Srinivasan et al., Kumagai and Matthews teach all limitations of claim 23. In addition, as applied to claim 1 above, Kumagai explicitly teaches displaying the merged image data on all workstation monitors, which specifically is displaying an image obtained by integrating divided images being generated by the image distribution device.

40. In regards to claim 25, Srinivasan et al., Kumagai and Matthews teach all limitations of the instant claim as applied to claim 11 above. Said limitations of the instant claim specifically are identical to claim 11. Kumagai explicitly teaches an interactive graphics system (Col. 3, liens 11-61), which specifically comprises a program for executing the

functions of the image generating device. In addition, it is well known and obvious in the art to implement any computer executable functions using a program.

41. In regards to claim 26, the same basis and rationale for claim rejection as applied to claims 23 and 25 are applied. The limitations of the instant claim are identical to claim 23.

42. In regards to claim 27, the same basis and rationale for claim rejection as applied to claim 25 above. The limitations of the instant claim are identical to claim 23 except for the feature, a storage medium. Kumagai explicitly teaches a plurality of storage devices (12, 13), wherein said program can be stored. In addition, all programs must be stored in a storage medium, and said storage medium is well known and obvious in the art.

43. In regards to claim 28, the same basis and rationale for claim rejection as applied to claim 26 and 28 above. The limitations of the instant claim are identical to claim 26.

44. In regards to claim 29, the same basis and rationale for claim rejection as applied to claim 1 above. For the same reasoning applied to rejecting claims 25-28 above, Kumagai teaches a computer program product, and it is well known in the art to perform computer executable functions using a computer program.

45. In regards to claim 30, the same basis and rationale for claim rejection as applied to claim 11 above. For the same reasoning applied to rejecting claims 25-29 above, Kumagai teaches a computer program product, and it is well known in the art to perform computer executable functions using a computer program.

46. In regards to claim 31, the same basis and rationale for claim rejection as applied to claims 23 above. The limitations of the instant claim are identical to claim 23 above.

47. In regards to claims 32-33, the same basis and rationale for claim rejection as applied to claim 1 above. The limitations of the instant claims are directed to the same limitations as claim 1 above. An image generating system of claim 1 specifically is an image processing method of claims 32-33.

48. Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Srinivasan et al., U.S. Patent No.: 6,357,042 in view of Kumagai, and further in view of Matthews, U.S. Patent No.: 6,701,012, and further in view of Takiguchi et al., U.S. Patent Application Publication No.: 2003/0107586.

49. In regard to claim 9, Srinivasan et al., Kumagai, and Matthews teaches all limitations of claim 11. In addition, Kumagai teaches a data memory (12) and a database (13) for storing graphics data. When the graphics data representing the target image is read from the data memory or database, an identifier must be present in order to identify each graphics data in the database. It is well known and obvious in the art to use identifiers for identifying the graphics data. Srinivasan et al., Kumagai, and Matthews do not explicitly teaches a first identifier identifying the target image, and at least one of a second identifier identifying an area divided by said division unit and a third identifier identifying each layer. Kumagai, however, explicitly teaches dividing said target image and merging said divided image back together. In order to merge said divide images back together, an identifier must be assigned to each parts of the divided image.

50. An analogous art, Takiguchi et al. explicity teaches assigning identifiers to each part of two images to be combined (FIG. 2 and Paragraph [0013]) in order to insure a perfect match between the two combined images. Said identifiers specifically are at least one of a

second identifier identifying an area divided by said division unit and a third identifier identifying each layer.

51. It would have been obvious to one of ordinary skill in the art at the time of the invention to take the teachings of Srinivasan et al., Kumagai, and Matthews and to add from Takiguchi et al., the obvious method of assigning markers in order to improve the accuracy and quality of the combined images. For example, markers provide visual instructions in combining two overlapping images, which increases the likelihood of a perfect match.

52. In regards to claim 10, the same basis and rationale for claim rejection as applied to claim 9 are applied. Takiguchi et al. explicitly teaches using the identifiers to merge the images back together.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hwa C Lee whose telephone number is 703-305-8987. The examiner can normally be reached on M-F 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hwa C Lee
Examiner
Art Unit 2672

HCL
11/15/04

MICHAEL RAZAVI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600